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## The Food of Some Crotalid Snakes from Fort Benning, Georgia

W. J. Hamilton, *Jr.*<sup>1</sup> and Joseph A. Pollack<sup>2</sup>

Fort Benning is located on the Georgia-Alabama line in Chatahoochee County, Georgia. It is an area of intergradation for many subspecies of reptiles. From late summer of 1949 to June, 1952, amphibians and reptiles were collected at the army post, principally in the ninety-acre ordnance section. More than 2000 specimens were taken in this period, collections being made in all months. Approximately 400 snakes, including 70 crotalids, were collected by Pollack. Detailed notes were made of the habitat in which the snakes were secured. Most specimens were immediately killed, preserved in formalin and forwarded to Hamilton for further study.

While general references on the food of crotalids are numerous, little specific data are available on these snakes from eastern United States. Most important are those of Surface (1906) , Wright and Bishop (1915) , Uhler, Cottam and Clarke (1939) and a general discussion of the natural foods of the water moccasin by Allen and Swindell (1948) . Schmidt and Davis (1941) have summarized the foods of the species treated below

Much of the habitat in which the snakes were taken is sandy with scant vegetation, but does include wooded areas and abundant thickets. Several sizeable ponds and a few streams are present in the collecting areas. Lizards are the dominant reptiles, most conspicuous of which is *Cnemidophorus sexlineatus*. *Lygosoma laterale* is extremely abundant, while *Sceloporus*, *Eumeces fasciatus*, *E. laticeps* and *E. egregius* are common throughout the area. The abundance of lizards is reflected in the food of most of the snakes which have been examined.

In examining these snakes, we have been impressed with the frequency of fangs found in the stomach. Often one, occasionally two,

<sup>1</sup>Cornell University, Ithaca, New York. ''  
Ordnance Corp. U. S. Army.

fangs occur in the stomach. On several occasions fangs have been recovered from an otherwise empty stomach. While the phenomenon of swallowing the shed fang is well known, the high incidence of recovery (in 14 per cent of those examined) suggests that fangs are replaced rather frequently, possibly every three or four weeks under natural conditions.

A long warm season and abundant food at Fort Benning allows rapid growth in snakes. Rattlers containing food were taken from March to November, some were abroad from December through February.

### Canebrake Rattlesnake, *Crotalus horridus atricaudatus* Latreille

Of 29 canebrake rattlers examined, 26 (90 per cent) contained food. This contrasts markedly with the incidence of food found in snakes reported by others. Uhler *et al.* (*loc. cit.*) found only 56.5 per cent of 253 Virginia rattlesnakes with food, while only half of the 30 rattlers examined by Surface (*loc. cit.*) contained food. The Benning rattlers varied in length from 381 to 1371 mm. On September 12, 1951, a small rattler was found coiled in a grapevine thicket four feet above the ground. This habitat was a favored site of *Opheodrys aestivus*.

Table 1. Food of 26 *Crotalus horridus atricaudatus*.

Food	Frequency in per cent
Mammals (19) .....	73.1
<i>Sigmodon</i> (9) .....	34.6
<i>Sylvilagus</i> (3) .....	11.5
<i>Peromyscus</i> (3) .....	11.5
Undetermined mammals (4) .....	15.4
Reptiles (6) .....	23.1
<i>Cnemidophorus</i> (3) .....	11.5
<i>Lygosoma laterale</i> (2) .....	7.7
<i>Eumeces laticeps</i> (1) .....	3.8
Birds (2) .....	7.7
Red-bellied Woodpecker (1) .....	3.8
Undetermined bird (1) .....	3.8

### Southern Copperhead, *Ancistrodon contortrix contortrix* Linnaeus

Sixteen stomachs were examined, three of which were empty. The specimens ranged from 474 to 1041 mm. in length. The largest individual contained three small musk turtles, with carapace length of 22-26 mm. The insects were all of large size and of primary origin, since no other food accompanied these remains in the stomach. Three copperheads were collected on March 23 and 29, 1950, when night temperatures had reached 31° F. These snakes gave off a pronounced

musky odor, a feature not noted in others that were taken. None of these contained even a trace of food, although all were well fleshed and heavy.

**Table 2. Food of 13 *Ancistrodon contortrix contortrix*.**

Food	Frequency in per cent
Mammals (6) .....	46.1
<i>Sigmodon</i> (4) .....	30.8
<i>Peromyscus</i> (1) .....	7.7
<i>Pitymys</i> (1) .....	7.7
Reptiles (4) .....	30.8
Undetermined lizards (2) .....	15.6
<i>Tantilla coronata</i> (1) .....	7.7
<i>Sternotherus</i> (1) .....	7.7
Insects (3) .....	23.1
Mantis, <i>Stegomantis</i> (1) .....	7.7
Locust, <i>Scudderia</i> (1) .....	7.7
Lepidoptera larva (1) .....	7.7
Birds—undetermined (1) .....	7.7

Eastern Cottonmouth, *Ancistrodon piscivorus piscivorus* (Lacépède)

The cottonmouth occurs most commonly in the ponds on the post. Night hunting for *Natrix* produced several of these pit vipers. They were taken in the water, either completely submerged, or with head and neck resting on the bank. One large individual, containing a water snake, was killed by a tractor mower at least a mile from the nearest water. Specimens ranged from 438 to 1038 mm. in length. The smaller snakes (438-556 mm.) had greenish yellow tails, indicative of immaturity.

**Table 3. Food of 9 *Ancistrodon piscivorus piscivorus*.**

Food	Frequency in per cent
Reptiles (4) .....	44.4
<i>Natrix</i> (2) .....	22.2
<i>Heterodon</i> (1) .....	11.1
<i>Kinosternon</i> (1) .....	11.1
Amphibia (4) .....	44.4
<i>Rana</i> (2) .....	22.2
<i>Hyla cinerea</i> (1) .....	11.1
<i>Microhyla</i> (1) .....	11.1
Mammals (Microtine) (1) .....	11.1

#### Ground Rattlesnake, *Sistrurus miliarius miliarius* Linnaeus

Of the 16 examined, 12 contained food. One snake had a quantity of dry grass and sand in the hind intestine. The high incidence of

large scolopendrid centipedes (50-85 mm. long) in the dietary, suggests a particular fondness for this prey. On September 18, 1951, a pair of these snakes were collected while copulating. The slightly larger male contained a centipede, while the female was empty.

Table 4. Food of 12 *Sistrurus miliarius miliarius*.

Food	Frequency in per cent
Reptiles (6) .....	50
<i>Lygosoma laterale</i> (3) .....	25
<i>Cnemidophorus sexlineatus</i> (1) .....	8.5
Undetermined lizards (1) .....	8.5
<i>Diadophis</i> (1) .....	8.5
Chilopoda— <i>Scolopendra heros</i> (4) .....	33
Mammals (2) .....	17
<i>Peromyscus</i> (1) .....	8.5
<i>Pitymys</i> (1) .....	8.5

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